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**Calibration Specification for Electrostatic Discharge Simulators
(English Translation)**

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Introduction

The calibration specification is based on GB/T 17626.2 "Electromagnetic compatibility - Testing and measurement techniques - Electrostatic discharge immunity Tests "and IEC 61000-4-2:2008" Electromagnetic compatibility - Testing and measurement techniques Electrostatic discharge immunity test " (Electromagnetic compatibility (EMC) -Part 4-2. Testing and measurement techniques-Electrostatic discharge immunity test) calibration requirements for ESD simulator compiled.

This specification is the first release.

ESD simulator calibration specification

1 Scope

This specification applies according to GB/T 17626.2 "Electromagnetic compatibility - Testing and measurement techniques - Electrostatic discharge immunity Tests" and IEC 61000-4-2:2008 "Electromagnetic compatibility - Testing and measurement techniques Electrostatic discharge immunity test" (Electromagnetic compatibility (EMC) -Part 4-2. Testing and measurement techniques-the instrument was calibrated Electrostatic discharge immunity test) electrostatic discharge simulator requirements, other types ESD simulator implementation.

2. References

This specification refers to the following documents.

GB/T 4365-2003 Electrotechnical terminology Electromagnetic compatibility (idt IEC 60050 (161).1990) GB/T 17626.2 electromagnetic compatibility test and measurement techniques - Electrostatic discharge immunity test IEC 61000-4-2:2008 Electromagnetic compatibility - Testing and measurement techniques - Electrostatic discharge immunity test (Electromagnetic compatibility (EMC) -Part 4-2. Testing and measurement techniques-Electrostatic discharge immunity test) for dated references, only the dated edition applies to this specification; undated reference documents Member, the latest edition (including any amendments) applies to this specification.

3 Terms

3.1 holding time Prior to discharge, leaving the test voltage drop due to leakage of not more than 10% of the time interval.

3.2 Transfer impedance transfer impedance ESD target - Attenuator - defined transfer impedance of the cable is injected into the current and the current output target input Voltage precision than 50ohm load (the precise load is placed at one end of the cable, replace the oscilloscope load).

Note: ESD simulator calibration procedure, if the current I_{sys} injected onto the target, then the oscilloscope displays a voltage V_{osc} . In order to use the current display voltage to calculate the unknown, we need to determine the low-frequency transfer impedance. Low-frequency transfer impedance can pass Determined through the following steps.

- In the front-end electrostatic discharge target injection 1A DC current I_{sys} . The front end of the current target is to discharge that side.
- In the cable end and the connection end of the oscilloscope, connect a 50ohm load precision. 50ohm load tolerance of $\pm 1\%$.
- voltage V_{50} measurement precision 50ohm load.

The transfer impedance. $Z_{sys} = V_{50} / I_{sys}$

4 Overview

4.1 ESD Simulator uses